

NORTHERN AFFAIRS AND POLAR RESEARCH
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PEMMICANI

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FOR RELEASE

PEMMICAN:

by

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WHAT IT IS, WHAT IT ISN'T, AND HOW TO MAKE IT

Not long ago, while looking for sheep in the mountains north of Jasper Park, three of us found ourselves at the summit of a low peak, played out and hungry. We had underestimated time consuming difficulties, and no one -- I thought -- had any food. It was in the face of this dim prospect that Dave, with some flourish, reached into his pocket and brought out a small tin. It was half the size of a sardine tin, but he assured us that it contained all the food we would need. "You see", he said, "it's pemmican."

I suppose I should have rejoiced. But I didn't. Because that little tin didn't contain pemmican -- although the label clearly said that it did -- and there wasn't enough food in it for three men. All of which has made me feel compelled to set the facts straight.

My friend Dave was the victim of two misconceptions, one his own, and one that of a manufacturer who should have known better.

As do so many people, Dave had an overly romanticized idea of what pemmican is and what it can do. He vaguely knew that it was the food of Indians and our pioneer explorers and that an astonishingly

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small quantity would sustain a man for an astonishingly long time. That part of it is correct, to a point.

With a bag of pemmican weighing no more than five pounds on his hip, a man of Peter Pond's time could roam the wilderness almost indefinitely. He hunted, of course, but when there was no game, he could always fall back on his pemmican. If his luck was really bad, he could go for a month straight on nothing else, and if he had a little parched corn, double that time. And he wasn't going hungry.

It is also true that pemmican was the standard ration of the voyageurs during the days of the fur trade. Twice a day these men doing the hardest physical labor from dawn to dusk, ate a lump of pemmican no bigger than a fist, and they were happy enough to sing about it.

And for at least sixty years explorers of the Arctic and Antarctic have used pemmican as the principal constituent of the trail diet. In this case, where men toiled for weeks on end in brutally cold weather, pemmican was found to be the most nourishing and satisfying of foods.

But however good a food pemmican is, it is far from being so good that Dave's little two-ounce tin could satisfy three hungry men. Had he produced three pounds of it, we would have fared a little better -- had it been real pemmican. And that was where some innocent -- or possibly shrewd -- manufacturer stumbled over his responsibilities. (That small tin cost ninety-five cents!)

The label said pemmican, but below that word the ingredients were listed. Contains: dried fruit, sugar, dextrose, glucose, vegetable matter, artificial flavouring, and moisture. It would be hard to pick a name for that concoction, but it is not pemmican.

This does not mean that it did not have concentrated nutritional qualities. It undoubtedly did, but almost assuredly they were less than a third of those found in real pemmican. Yet it is hard to make people believe this. Somehow the notion has been established that pemmican contains sugar, that it should be sweet to the taste.

No less an authority than the Oxford Dictionary of English puts it simply enough. Pemmican is "...a preparation made by certain North American Indians, consisting of lean meat, dried, pounded, and mixed with melted fat so as to form a paste ...". Nothing more, nothing less.

An old recipe of the Plains Indians gives a slightly better idea. "Lean meat of the buffalo was cut into thin strips and hung in the sun for two or three days to dry. When it was thoroughly dry and brittle, it was pounded to powder between stones. The powder was then mixed with melted fat and tallow of the same animal. The whole mass was sewn up in a buffalo hide bag where it would keep until needed ...". The man who saw and wrote that was an eye witness to what is fast becoming a lost art.

And the pity of it all is that real pemmican is, from every consideration, such a good food for the outdoorsman. Horace Kephart gives a recipe in his classic volume on camping and woodcraft, but he devotes far more space to a discussion of pinole, a far inferior food. And Townsend Whelen laments: "Pemmican is little known or used these days, but it is without a doubt the one most perfect food ... for ... the wilderness."

One of the stumbling blocks is undoubtedly the fact that pemmican is one hundred percent meat - if by meat is meant both the lean and the fat - coupled with the popular fallacy that man cannot

live on meat alone, that he must augment his diet with vegetable food.

Tests made at the Russell Sage Institute a number of years ago disproved this once and for all. Over the course of a year it was shown beyond dispute that men could live on meat exclusively.

The average daily requirement is about 3 pounds of lean and $\frac{1}{2}$ pound of fat. On this and this alone you can live indefinitely in good, if not superior, health. The Russell Sage experiment is described fully in Vilhjalmur Stefansson's book 'Not by Bread Alone', and it is a book, incidentally, which should not be missed by anyone who is at all interested in the subject of meat eating and pemmican.

Another obstacle in the way of pemmican popularity is that it is hard to buy, a nuisance to make, and in either case expensive.

In another day, when twenty black powder cartridges could bring down twenty thousand pounds of buffalo meat, this last was no consideration. But today, with no buffalo and beef the way it is a month's ration of pemmican for one man will cost about \$100. Which isn't prohibitively expensive if a man is willing to stick to straight pemmican. Which brings up the last stumbling block.

The average person, long used to a varied diet containing sweets, salt, vegetables, and cereals with only a small amount of meat, will not be able to take a diet of straight pemmican simply because he won't like the taste of it. Not that you can't learn to like it and once having done so swear that there is nothing quite like it for outdoor fare, but at first you are sure to balk. Friends on whom I have tried it have invariably said "Ugh". They ate it politely, but after the first trial meal they would return to their broiled bacon and flapjacks and eye me a little sympathetically.

But you can acquire a taste for it. And if you are the sort who is really interested in travelling as lightly as possible, you will find pemmican to be more than a mere curiosity, -- which is the way a good many sportsmen look at it: Great stuff which must have been wonderful in its day, but not for them.

Well, in argument against such a stand here are a few facts.

Pemmican, as indicated above, is the perfect or near perfect all-round food. It has all the nutritional value necessary to keep an active human body in good health.

Pemmican is a satisfying food. This is an important point.

After a hard day's tramp which has produced a keen appetite what is wanted is a food that creates a "filled up" feeling. And pemmican does exactly that. At the same time, pemmican lasts, it "sticks to the ribs". The reason for this is its high fat content. Sugars and starches turn to energy quickly; fat does so much more slowly, supplying the body steadily and continuously throughout the period between meals. Moreover, pemmican is a food endowed with its own system of checks and balances. You definitely need an appetite to take very much of it, and at the same^{time}/it is literally impossible to overeat on it.

Pemmican is a compact portable food which contains more nourishment for its bulk and weight than anything else commonly known, and it is therefore invaluable in any sort of travelling where bulk and weight are important. This property also is the consequence of its high fat content. The physical bulk of the human diet is made up of energy producing foods, the calorie generators which stout women watch and active men need. And fat supplies this

more efficiently than any other food. Sugar, for instance, has certainly come to be thought of as a concentrated energy producing food, but it has, by weight, only one third the energy of fat. And that shows why any mixture with sugar in it is not only not pemmican but an inferior food.

Pemmican keeps indefinitely. It is virtually indestructible. This point cannot be made too emphatically. When properly prepared and given a minimum of subsequent care, neither desert heat, nor Arctic cold, nor rain, nor drought can spoil it. I have been able to find no records which tell how long it will last, but in one account there is a description of the finding of pemmican which had been buried in the ground for over five years. Outside the mass was encrusted with mould and rot, but inside was pure, sweet, nourishing pemmican. My own experiments with pemmican began about four years ago, and part of the original batch is still in storage and in perfect condition. As it stands it should certainly last another 20 or even 50 years.

Pemmican is a food simple to prepare and eat. It actually needs no preparation; it can be eaten raw out of the hand. And even the most elaborate recipe could use no more than a single pot and spoon. It is the one food for the outdoorsman which causes absolutely no fuss, muss, or bother. And this is no small consideration for anyone who has tried to have hunter's stew, bannock, and coffee hot and ready at the same time.

And lastly, you can make pemmican at home. The only equipment required is a dry place to air dry the meat and an ordinary household food grinder to reduce the dried material to

powder. With no more than this you can produce a fine uniform, dirt-free trail food that is better than even the Indian product which old accounts tell us was, "...most certainly a substantial food but profuse in its content of sand, small pebbles, sticks, grass, buffalo hair, and sundry other impurities which assailed the teeth most unpleasantly."

First you will need to get some beef and -- unfortunately -- plenty of it; the reduction which takes place in the drying is astonishing. Assuming, however, that you are going to make it on a small scale, you can spread the purchase of the meat over a number of weeks, or even months, making the pemmican as you go and ending with a complete supply at about the time you want to use it.

You can use sirloin or flank steak, but when it's dry, it is absolutely indistinguishable from neck or rib meat. Your pocketbook should be your guide. Any reasonably fresh beef will do.

Carefully separate the fat from the lean and cut the meat into thin strips. Again, in the case of a small scale operation, pieces about the size of a finger have seemed to me to be the most convenient.

Next put the meat out to dry. You can do this in almost any way. I have tried clothes lines, wire racks, and newspapers spread out on a table. The important thing is to turn the meat over from time to time to insure equal drying on all sides. In a warm dry atmosphere, such as found in an ordinary house, it takes about three days for the meat to dry. If pieces are larger, this will naturally be longer.

When perfectly dry the meat will be very dark brown, almost black in colour, and quite brittle. The brittleness serves as a test to determine when the drying is finished. When the pieces of meat can be broken in the fingers with a snap like a matchstick produces, they are dry. If not, if there is any "give" at all, there is still moisture present, and the drying has to go on a little longer.

One word of warning: Do not use any artificial heat which might cook the meat. Even if only slightly cooked the meat will spoil rapidly.

The next step is to grind the meat in an ordinary food grinder, being sure to feed it slowly because some of the sinews will be very tough and hard. What comes out of the grinder will be a bone dry, fluffy, light brown material with a slightly unpleasant meaty odor.

Now all that remains is to mix the dry meat powder with fat in the proper proportion.

The Russell Sage tests showed that one man requires 3 pounds of lean and $\frac{1}{2}$ pound of fat per day. This works out to a lean to fat ratio of 6 to 1. However, six pounds of lean beef, when thoroughly dry, will yield one pound of powder, and therefore the scientifically correct ratio of dry meat to fat is simply 1 to 1. It is no curiosity that this agrees exactly with an old Hudson's Bay Company recipe which called for the mixing of "equall parts by Weight of the pounded dry Meate and warmed Tallow of Buffaloes". It is of further interest to see that the 3 pounds of lean and $\frac{1}{2}$ pound of fat in the daily requirement of one man thus reduce to one pound of pemmican. And that also shows why my friend Dave's little two-ounce tin of "pemmican" could not possibly have afforded a sustaining ration for one man much less three.

Viewed on a large scale, a steer which dresses to 700 pounds will yield about 117 pounds of dry meat. This makes 234 pounds of pemmican, food for two men for about two months.

The rest is simple: Mix the dry meat powder with fat in equal proportions by weight -- use a scale! One-half pound of dry meat plus one-half pound of fat makes one pound of pemmican.

The fat to use, and the only one I would recommend, is rendered beef suet. It is a "dry" fat, hard when cool, and it gives the pemmican the proper beefy flavor. I suppose lard would do as well, but it would be very greasy, have a tendency to get soft in warm weather, and possibly be offensive to a palate which is making some sacrifice in the eating of pemmican in the first place. Butter and margarine are out. They not only turn rancid in a comparatively short time, but both contain salt which, contrary to popular belief, does not help preserve the pemmican and will actually harm its nutritional values. Stick to rendered beef fat. It's the cheapest and the best.

Melt the fat in a pan of some sort, pour it over the meat powder, mix thoroughly, and when the mass is cool, your pemmican is finished and ready for eating. Originally the pemmican was stored in hide bags, ninety pounds to the bag. But I have found it most convenient to pour it into press-top tins of the sort used for dried milk and jam. They give adequate protection and are convenient to handle.

Once I tried something very elaborate. I poured the warm pemmican mixture to a depth of about two inches into rectangular baking tins. When it was cool, I cut it into blocks each weighing

one pound. These I wrapped in brown paper, tied with a string, and dipped several times in hot paraffin. The result was a neat, compact, waterproof package containing exactly one day's ration.

If your outing plans call for something like that, you will find it works out very well.

Most authorities on the subject mention berries -- such as the Saskatoon of the western prairies -- as an almost essential ingredient in pemmican. This is not quite correct. The Indians did use berries in their pemmican; but they used them very much as we use butter on our bread. They liked berries only as a change from the ordinary every day pemmican. The practice of adding berries did not come into wide or frequent use until white men began eating pemmican in large quantities in the days of the fur trade, and again, it was done purely to change the flavor. Berries can add nothing to the already complete food value of pemmican, the improvement of flavour is dubious because they become quite acid, and they definitely increase the risk of spoilage.

The last thing to consider is how to eat pemmican. It can be eaten raw with no preparation whatsoever -- bitten off and swallowed with very little chewing. But most men, used to the flavour of cooked meat and totally unused to consuming large quantities of cold fat, will find this method definitely unpalatable. A better way is to put a lump of it into some cold water and then heat until it boils for a few minutes. This is properly called a hoosh or a robidoo, and you can vary the thickness to suit your taste. Bread or crackers broken into the hoosh are the final touch for goodness -- however, they are not necessary from a nutritional point of view. Pemmican alone is enough.

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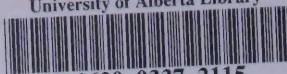
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